



DNR

2007

## MAP MODERNIZATION IN SOUTH CAROLINA

# Quick Guide

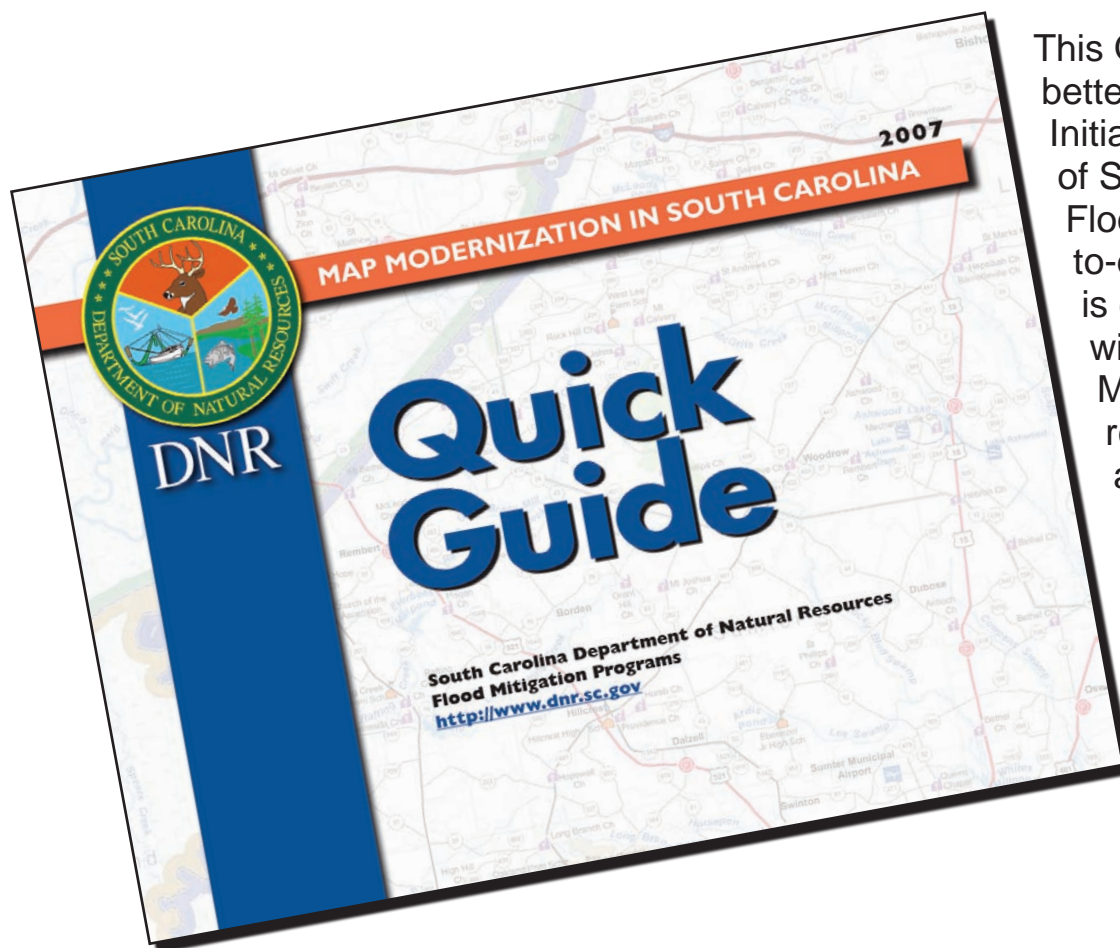
**South Carolina Department of Natural Resources  
Flood Mitigation Programs**

**<http://www.dnr.sc.gov>**

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## About This Guide



This Quick Guide was designed to help you better understand the Map Modernization Initiative as it is implemented in the State of South Carolina. As part of the National Flood Insurance Program, it is vital that up-to-date and accurate floodplain mapping is done in South Carolina. This guide will walk you through the steps of the Map Modernization Program and the requirements on the local government as a result.

Questions and concerns on the Quick Guide can be directed to the South Carolina Department of Natural Resources, Flood Mitigation Program at <http://www.dnr.sc.gov>.

# The National Flood Insurance Program (NFIP)



The National Flood Insurance Program is broken down into three main categories. These include flood insurance, floodplain management, and flood hazard mapping.

## **Floodplain Insurance**

- ☐ Community participation in the National Flood Insurance Program allows for property owners to purchase flood insurance. This is vital, as most homeowner's insurance policies do not cover losses as a result of flooding.

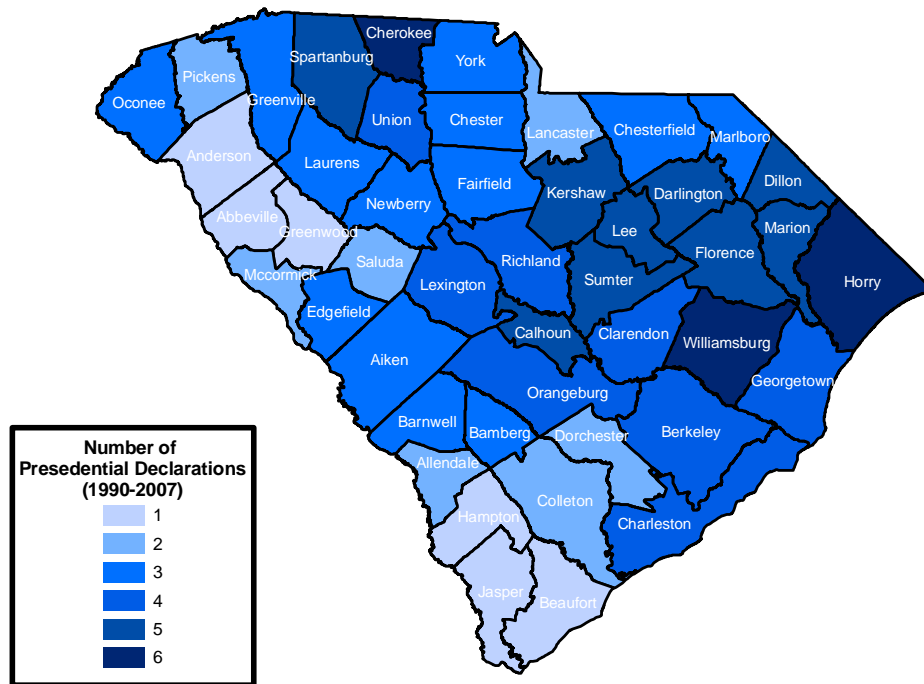
## **Floodplain Management**

- ☐ Through the adoption and enforcement of a local floodplain management ordinance, local governments can actively reduce the number of structures at risk for flood damages.

## **Flood Hazard Mapping**

- ☐ With accurate, up-to-date flood mapping, communities can obtain a firm grasp of the flood risk they face. This allows for sounder floodplain management decisions.

# South Carolina Floodplain Facts



- Every county in South Carolina has identified flood-prone areas.
- There are currently over 209,000 structures located in an identified floodplain in South Carolina.
- There have been over 165 flood-related deaths in South Carolina since 1900.
- Approximately 15% of the State's land has been mapped in a floodway.

It is important to note that many localized flooding events do not qualify for Presidential Declarations.



## Why Is South Carolina Undertaking This Project?

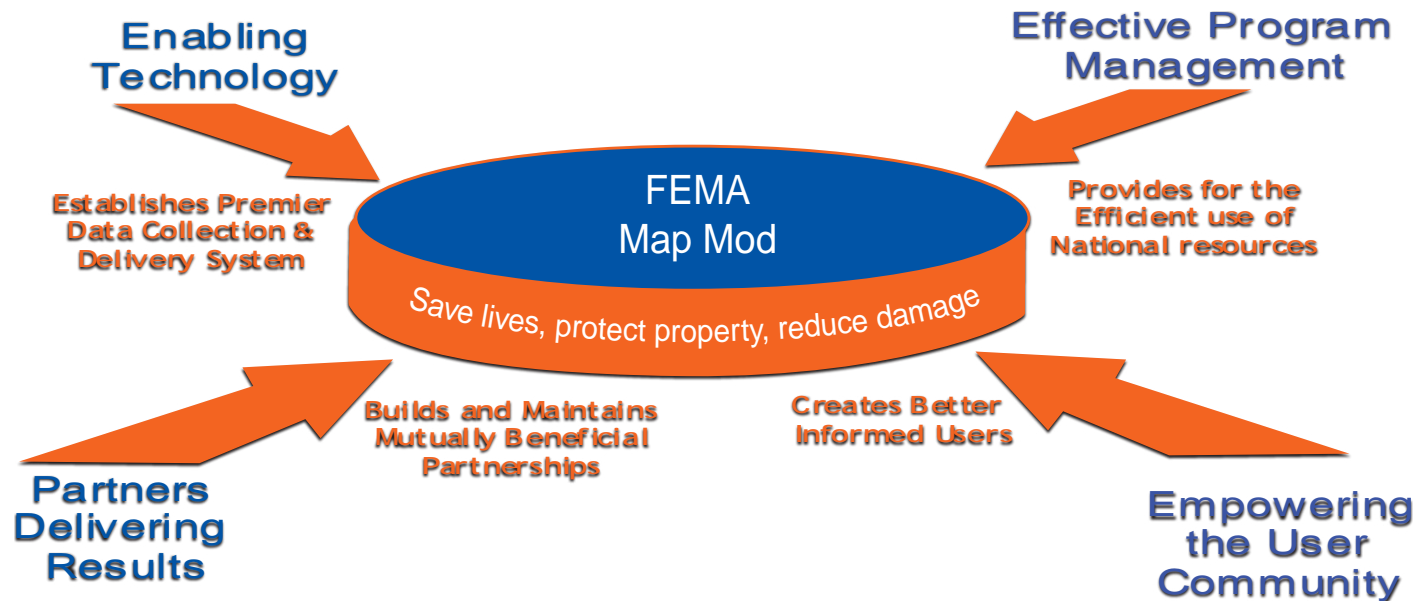
Due to the significant percentage of FIRM panels that are over ten years old in South Carolina, the South Carolina Department of Natural Resources Flood Mitigation Program has been a Cooperating Technical Partner (CTP) with the FEMA Map Modernization Project since 1999. In addition to the state's aging map library, as of August 2007 over 70 communities have never been identified as having a special flood hazard area, meaning these areas have never been mapped.

It is important to note the several additional reasons the South Carolina Department of Natural Resources Flood Mitigation Program believes it is vital to undertake this project. They include:

- Accurate, up-to-date flood hazard information will be obtained;
- Wiser floodplain management will be promoted throughout the State;
- South Carolina is extremely vulnerable to hurricanes and their devastating damages;
- Property owners will be better informed of the true flood hazards of their property; and
- Unnecessary insurance purchases and uninsured losses will be prevented.



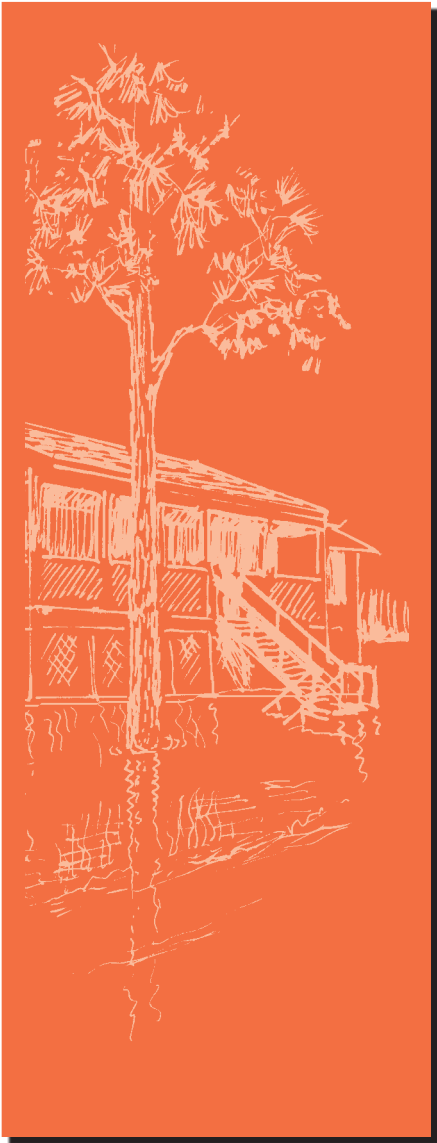
## So What Is The Map Modernization Project?



Map Modernization is a five-year, one billion dollar project implemented by the Department of Homeland Security's Federal Emergency Management Agency (FEMA) to update the Nation's flood insurance rate maps (FIRMs). FEMA will produce seamless, nationwide flood data published in digital format, and delivered in Geographic Information System (GIS) format. Using a GIS format will allow for easy data sharing across all levels of government. During the update, several study methods will be used to digitize current FIRMs, restudy sections of water edge as needed due to growth and development, and review study areas previously studied.

As a result of the above process, FEMA hopes to produce higher quality map products, reduce map production time, and reduce the costs associated with future updates of map studies and the maps they produce.

# What Are The Goals Of Map Modernization?



The goals of FEMA's Map Modernization Program include;

- Providing current, accurate data for responsible growth;
- Better floodplain management to reduce long-term flood losses;
- Updated data to alert at-risk property owners of the need for flood insurance; and
- Faster, less expensive future updates of FIRM panels.

In addition to FEMA's goals stated above, SCDNR's Flood Mitigation Program hopes to;

- Increase the quality and accuracy of South Carolina floodmaps;
- Greatly reduce the number of Unnumbered A Zones to facilitate the use of the maps;
- Provide 24 hour, 7 day a week access to the maps; and
- Increase use and the end user's knowledge regarding the flood maps.



## Who Are The Players?

In order to successfully accomplish the goals of the Map Modernization Program, several players must work together. They include FEMA, the National Service Provider (NSP), the State of South Carolina, and the State's local governments.

### FEMA

- Sets national standards and requirements including guidelines and specifics
- Provides significant share of funding
- Enters into agreements with States and local governments as Cooperating Technical Partners
- Acts as an advocate for states on the national level
- Establishes national metrics

### NSP

- Supports FEMA in the implementation of the Map Modernization Program through the overall management of it
- Provides tools and procedures
- Develops the Multihazard Information Platform (MIP)

### LOCAL COMMUNITIES

### STATE

- Overall responsibility of the FIRMs delegated to the state through the CTP agreement
- Conducts quality assurance checks on updated mapping products
- Informs communities of purpose and methodologies to be used in the restudy
- Ensures communities meet all deadlines required by FEMA, allowing communities to remain in good standing with the NFIP
- Encourages participation in the NFIP

## What Is The Role Of The Local Communities?

### LOCAL COMMUNITIES

- Implementation and enforcement of good sound floodplain management,
- Ensure that they continue to meet the minimum regulations of the NFIP to ensure eligibility,
- Present contractors with pertinent information such as base map data, historic flood information, and growth trends in your community,
- Conduct outreach through the distribution of information to local residents who will likely be affected by the flood map update,
- Review the minimum NFIP requirements to ensure that your local floodplain ordinance still meets eligibility standards of the program,
- Understand the study phases of the Map Modernization Program,
- Review the complete set of preliminary maps produced by FEMA or state contractor to ensure accuracy,
- Submit any protests or appeals necessary during the post-preliminary process of your community's study,
- Update and adopt your local floodplain management ordinance, and
- Adopt all newly produced FIS and its associated FIRM panels that affect your community.
- Additionally, communities can become a CTP.

The State has produced a checklist for community officials to aid in the Post-Preliminary Phase of the Map Modernization process that is distributed at the Post-Preliminary DFIRM Community Coordination (PDCC) Meeting.

# What Is A Cooperating Technical Partner (CTP)?

The Cooperating Technical Partner Program was developed by FEMA for communities, tribal nations, universities, and regional and state agencies that have the interest, capability, and resources to be an active partner in FEMA's mapping program. Becoming a CTP formalizes one's commitment to the production of accurate floodplain mapping. Currently, there are 34 active CTPs within FEMA Region IV.

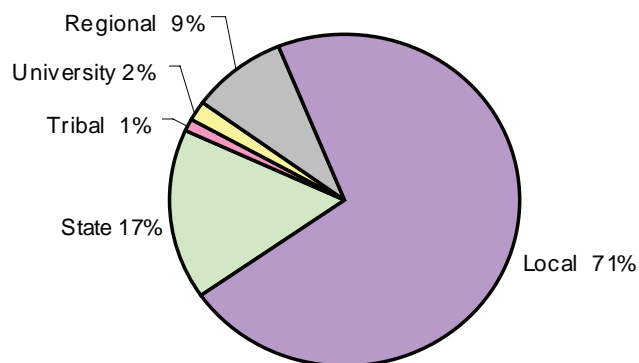
## Objectives

- To ensure that those entities extensively involved with the Map Modernization Program receive proper recognition for their work
- Maximize limited funding at the federal level
- To ensure that minimum standards are met nationwide with regard to the National Flood Insurance Program

## Benefits Of Being A CTP

- Allows for more detailed mapping through the introduction of local geospatial data
- Receive additional FEMA assistance in regards to the Map Modernization Program
- Available training and online support for CTPs
- Receive Community Rating System points towards a premium reduction for your community

## CTPs By Organizational Type



## Additional Information

For more information, contact FEMA by accessing the Cooperating Technical Partner website at:

[www.fema.gov/plan/prevent/fhm/ctp\\_main.shtm](http://www.fema.gov/plan/prevent/fhm/ctp_main.shtm)  
or by calling the Mapping Assistance Center at  
**1-800-FEMA-Map (1-800-336-2627).**

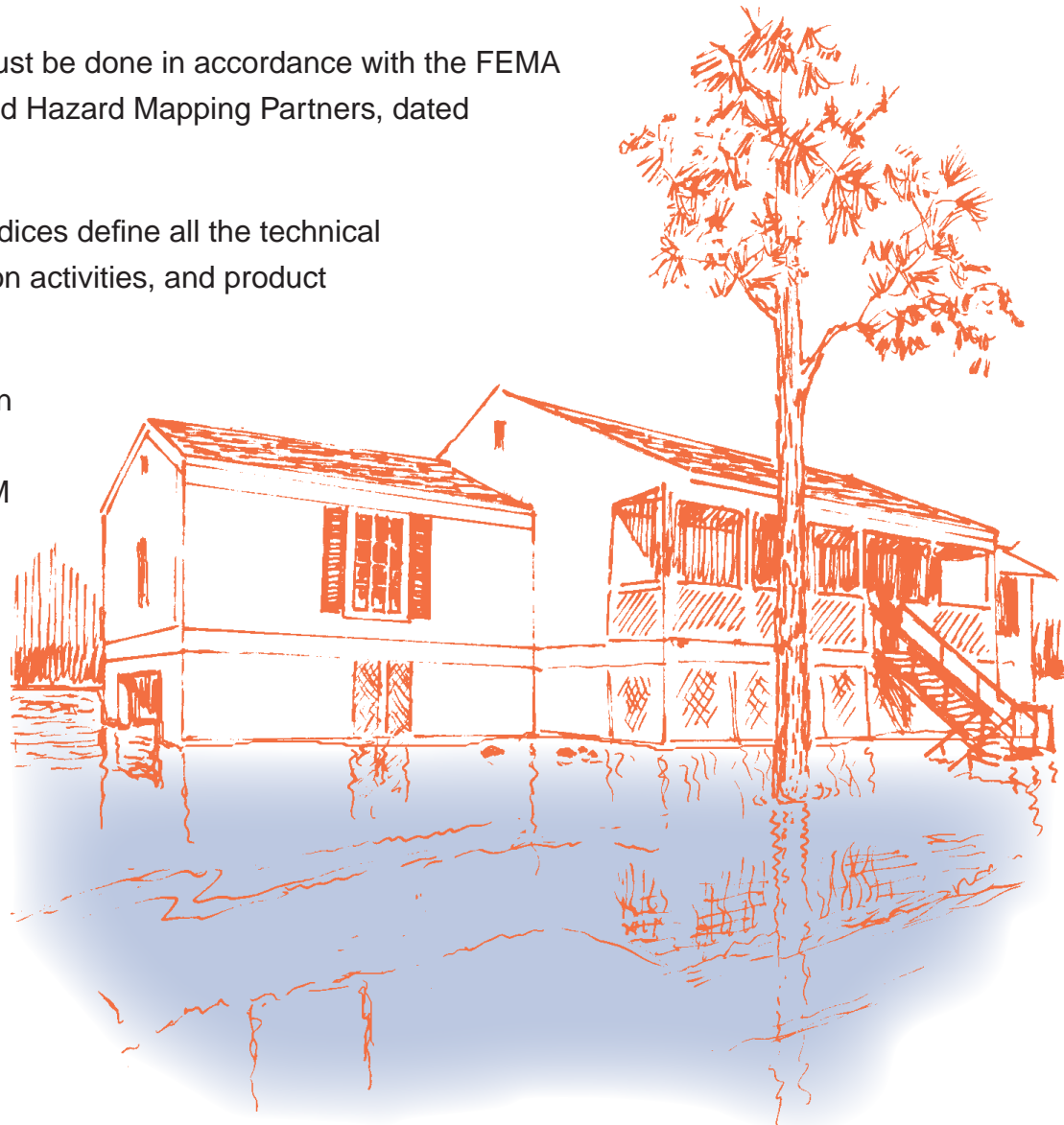
## Guidelines And Specifications For Flood Mapping Partners

■ All flood hazard assessment and mapping must be done in accordance with the FEMA issued Guidelines and Specifications for Flood Hazard Mapping Partners, dated February 2002.

■ The three volumes and 13 web-based appendices define all the technical requirements, coordination and documentation activities, and product specifics for mapping products.

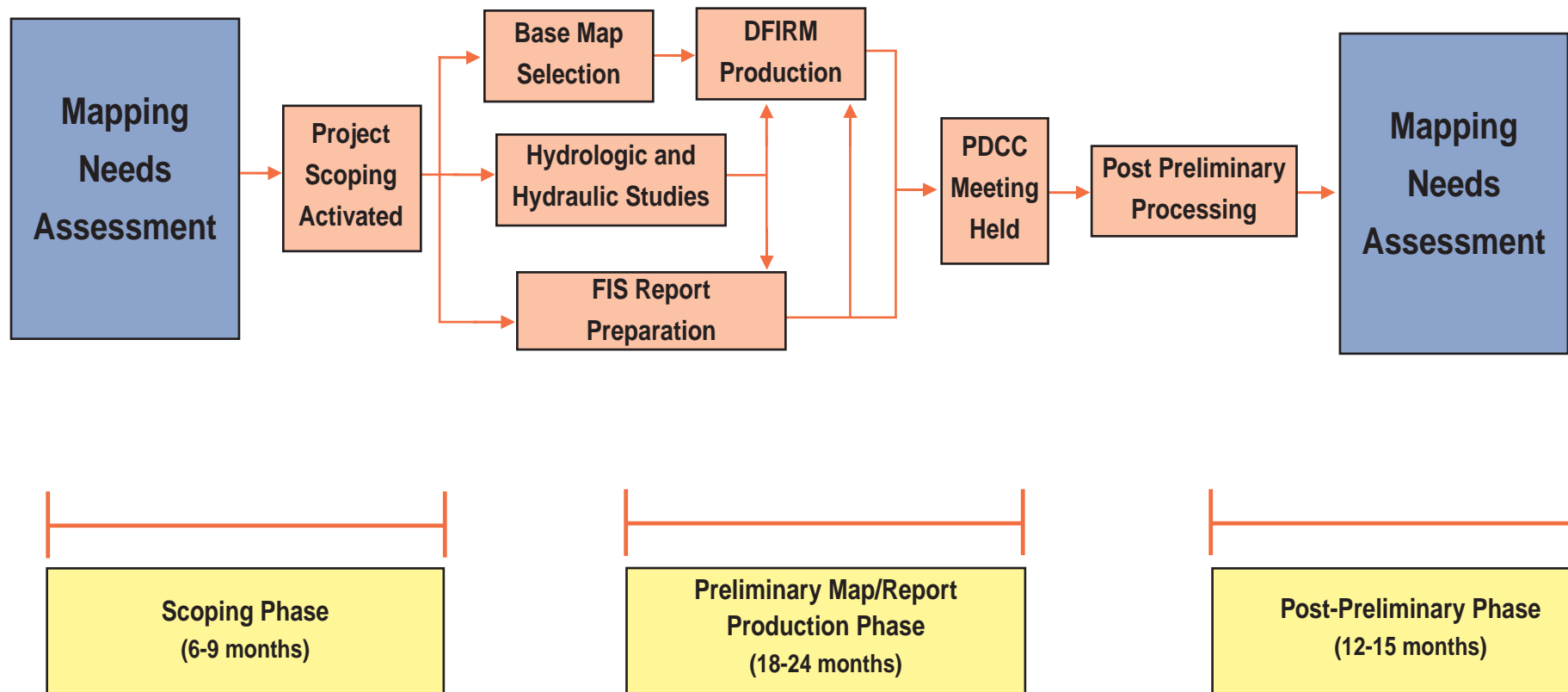
■ Significant changes were made to this version of the guidelines in regards to the Data Capture Standards and the Enhanced DFIRM Database.

■ The Guidelines may be downloaded from the FEMA website at [http://www.fema.gov/plan/prevent/fhm/gs\\_main.shtm](http://www.fema.gov/plan/prevent/fhm/gs_main.shtm) or by calling the FEMA Map Service Center toll free at 1-800-358-9616.



## Typical Study Process

There are three major phases to the Map Modernization Process, beginning with the collection of base map data and ending with the newly created FIS Reports becoming effective. Due to study specifics for each county the duration of each phase varies slightly.





## Pre-Scoping Phase

The 46 counties of South Carolina were prioritized to determine which year funding would be available to complete the update process for each. Priority was based on several factors including detail of previous studies, amount of unmapped area remaining, growth rate within county, and severity of the flood hazard. During each funding year a Mapping Activity Statement is completed between FEMA, the State, and our contractors. This report outlines potential funding and study detail for each county to begin the Map Modernization process in that year.

During the Pre-Scoping Phase many activities that involve our state contractor and the communities occur. They include:

- Determining the availability of local base map information;
- Communities are asked to prioritize study needs;
- Assembling a catalog of high water marks collected by local officials, including photographs of past events, if available; and
- Coordinating the local Scoping Meeting between the State and local governments.

## Factors For Study Priorities

There are many factors that a community should consider while determining their study priorities. It is important to realize that funding limits may not allow for all needs and wants to be addressed during this study cycle. All unmet needs will be forwarded to and cataloged by FEMA. The database of unmet needs is one factor used to determine future funding allocations, so it is vital to provide the state with all mapping concerns. Factors to include in the prioritization process include, but are not limited to:

- Areas of existing or anticipated development,
- Areas in which new road crossings have been built,
- Areas in which significant changes have been made to the physical landscape,
- Areas currently not studied or studied using approximate methods only, and
- Areas that currently appear outside the floodplain that has experienced past flooding.

## Scoping Phase

The Scoping Phase will be kicked off with a local community Scoping Meeting in which information is exchanged between the community and FEMA.

### FEMA and the State

Provide information on the Map Modernization process in anticipation of the upcoming update.

### Local Community

Provide information on base map availability, GIS capabilities, community prioritization of mapping needs, community contact information, and anticipated participation level.

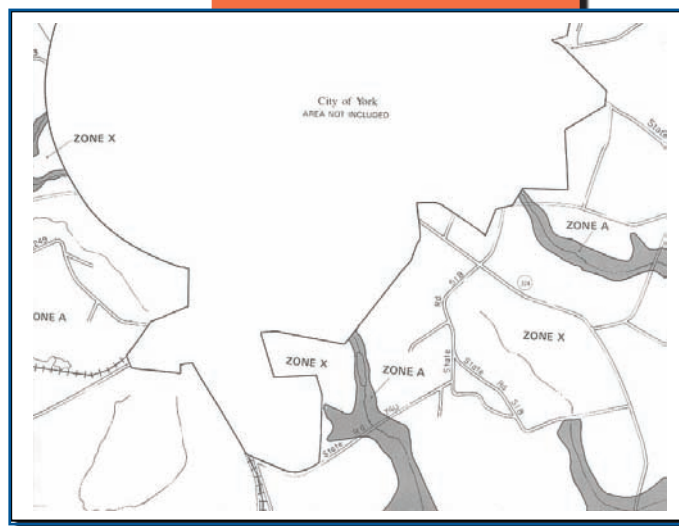
Once mapping needs are determined, a final budget and scope of work will be completed and included in the Scoping Report.

Throughout this phase, FEMA, the State, and/or our contractors will continue to communicate with localities to obtain the information indicated above. Once data collection and research are completed, the best available data will be used to complete the map update during the production phase.

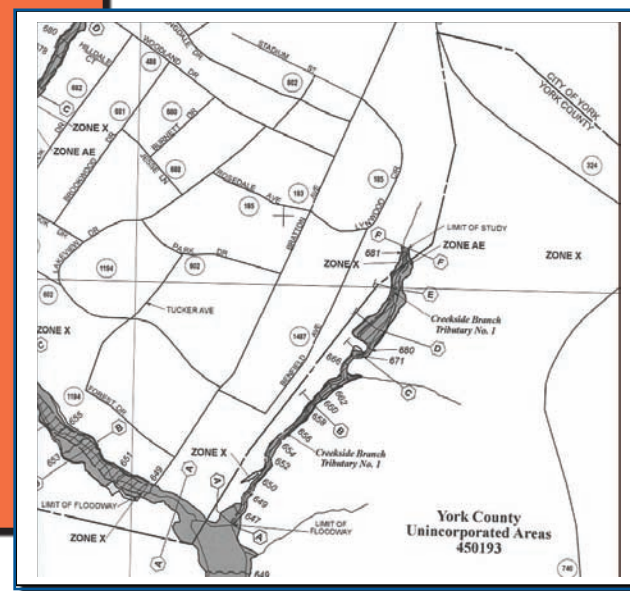


## Production Phase

During the production phase of the Map Modernization process, the state's contractors will complete the mapping scoping of work. This will be accomplished through the completion of any combination of the four major types of studies: redelineation; approximate; limited detail; and detailed engineering studies. Contractors will take into account best available data concerning past floods, base map information, redelineation of existing studies, and the results from newly run hydrologic and hydraulic studies when developing a new mapping product. The results will include a full Flood Insurance Study and its associated Flood Insurance Rate Map panels.



**FIRM Panels of the same area before and after the Map Modernization process update**



## Study Methods: Redelineation

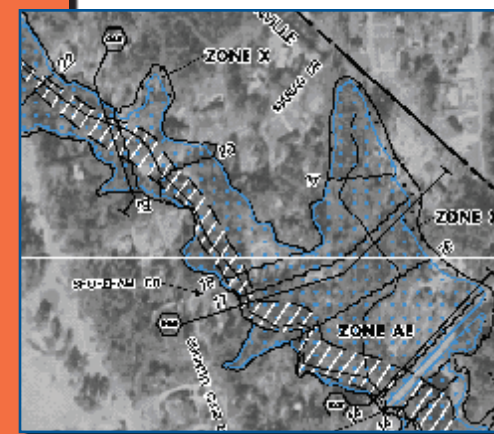
Redelineation uses the current effective FIRM map and combines it with the use of new terrain or topographic information. This includes a conversion of the datum used from the NGVD 1929 to the NAVD 1988, as well as the digitization of the cross section information. Due to the study method, current stream stations are not usually adjusted to the new topographic information.

### Pros for use

- No new engineering
- Inexpensive
- Effective maps bought up-to-date with current terrain data
- No appeal period since BFEs are not changed
- Allows all LOMC to be incorporated into new map product

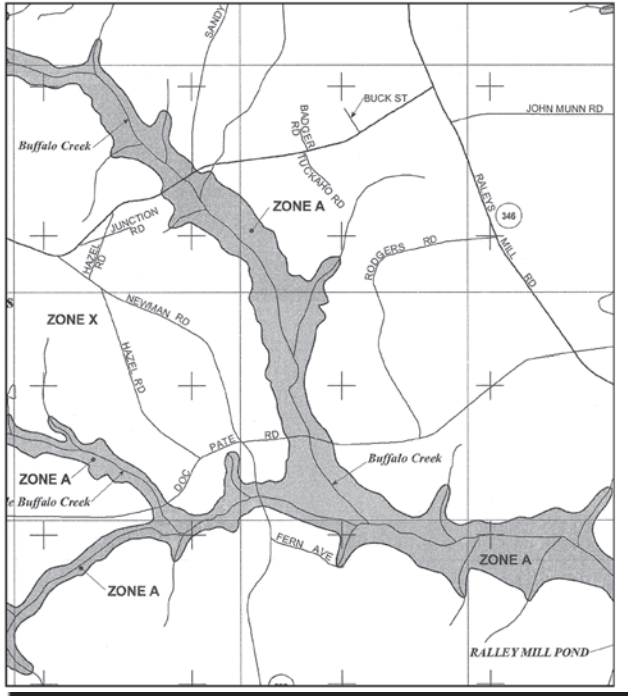
### Cons for use

- Does not always include new development
- If inaccurate in the past will remain inaccurate
- Tie in issues may result such as BFEs, discharges, and floodways





## Study Methods: Approximate Study



Approximate studies provide flood boundaries based on best available data and techniques; they are not supported by a true engineering study. As a result, only the presence of the floodplain is indicated without BFEs or cross sections.

### Pros for use

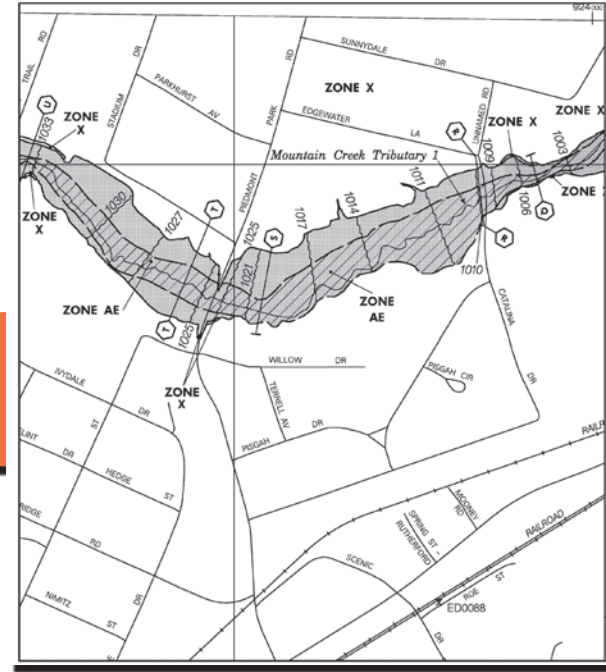
- Inexpensive
- Produced quickly

### Cons for use

- The quality of the end result is dependant on the quality of the base topographic data available.
- No BFEs, thus not as useful from regulatory standpoint.

## Study Methods: Limited Data Study

With the use of model outputs, limited data studies allow BFEs to be determined for the study location. In addition, the limited data study method produces cross section data that is included on the effective FIRM. The use of limited data studies is the most cost effective method to replace Unnumbered A Zones through the use of various topographic resources, hydraulic models, and regression equations.



### Pros for Use

- Based on engineering models
- Produces a calibrated defensible product
- Approximately  $\frac{1}{5}$  to  $\frac{1}{10}$  the cost of detailed studies
- Completed using standardized methods and quality control methods

### Cons for Use

- Not applicable in urban areas
- Watersheds with storage may result in inaccurate results
- Tied into detailed studies and redelineation
- Not as accurate as detailed studies

## Study Methods: Detailed Study

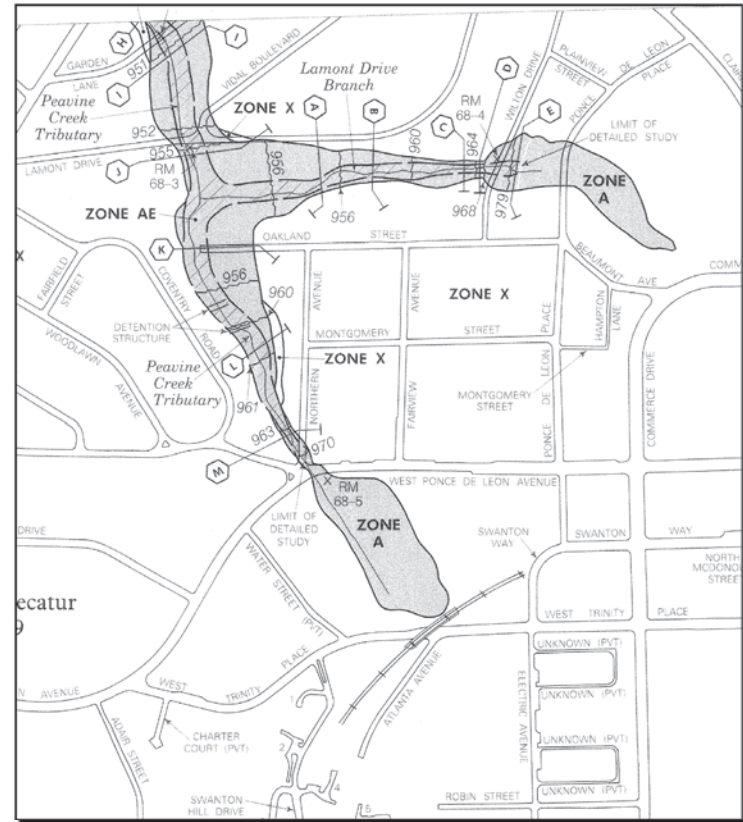
Detailed studies combine limited data studies with fieldwork. This work includes field surveys, detailed calibration, and floodway mapping. Detailed studies include the survey of all hydraulic structures, analysis of hydrology, and extensive model calibration.

### Pros for use

- Most accurate, detailed picture of the flood risk

### Cons for use

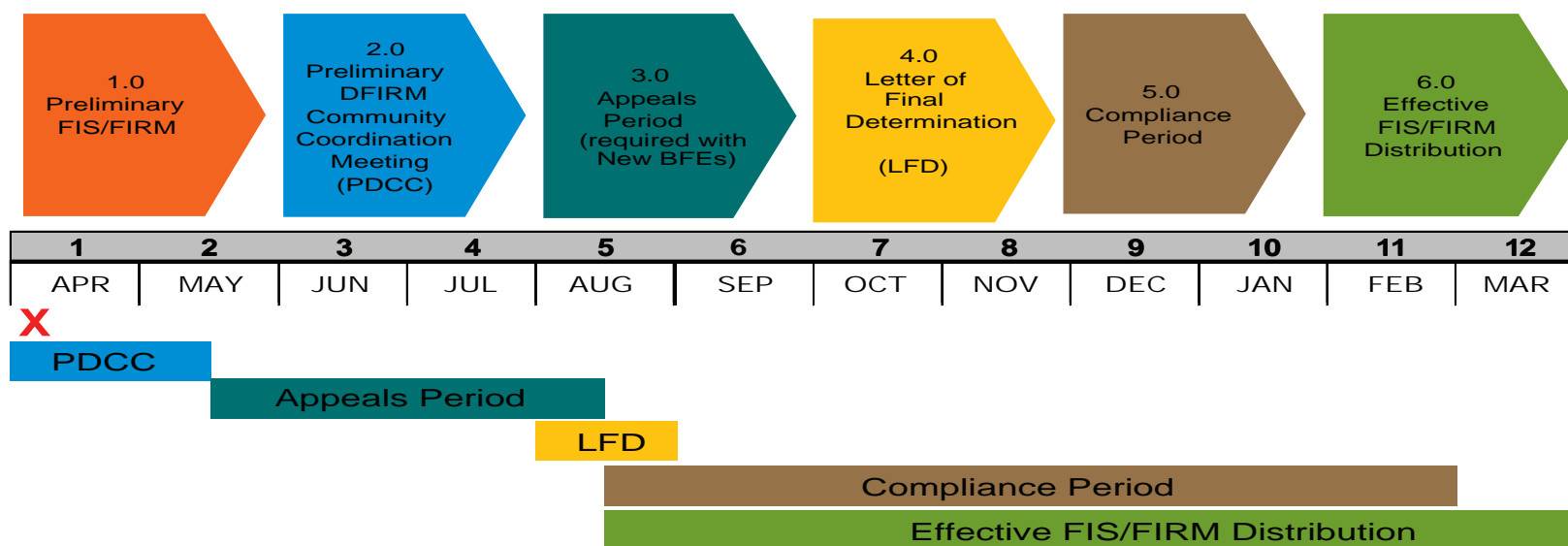
- Cost prohibitive
- Extensive time commitment



## Post Preliminary Phase

### Post-Preliminary Process

*Time frames may vary from study to study*



Once your community's preliminary maps are completed they will be forwarded to the Chief Executive Officer's attention approximately 45 days prior to the local Preliminary DFIRM Community Coordination (PDCC) Meeting. This is to allow for your review and comment on the overall map product. Coordination will occur to set up the PDCC meeting in which the remaining phases of the Map Modernization process and important deadlines are discussed.

## 90 Day Appeal Period

Following your community's PDCC meeting, FEMA will publish notice in the Federal Register of any changes to base flood elevations on your updated maps. Following the notice, two legal notices will be published in a local newspaper approximately one week apart. Following the completion of all three notices, the formal 90 Day Appeal Period will begin. At this time, any stakeholder may submit a formal appeal or protest to the SCDNR Flood Mitigation Program through their local governmental office. Local governments must review ALL preliminary map panels during this period to ensure the highest quality map products possible.

### The Protest Process

A protest is appropriate in the event that base map information is incorrect. Additionally, the use of protests is used to refute other items of non-technical data. They include road locations, road names, corporate boundaries, floodplain boundary delineations, and floodway limits.

### The Appeal Process

Appeals should be submitted in the event that technical data on the preliminary maps are incorrect. This includes the use of incorrect data, use of incorrect methodology, error in analysis, and errors in the application of the analysis. The result of the errors mentioned above is an incorrect BFE. To submit an appeal, one must recalculate the BFE and provide justification and scientific evidence for the methodology used and findings.

All appeals and protests submitted during the formal 90 Day Appeal Period will be reviewed. A letter will be sent indicating the resolution of the appeal/protest, followed by a short comment period. All changes necessary to the preliminary maps will be completed prior to the Letter of Final Determination. We encourage local governments to solicit comments of the proposed maps from such professional groups as the local surveyors chapter or home builders who can help you review false maps for accuracy.



## How Do I Submit A Protest Or An Appeal?

All protests and appeals must be submitted through the local entity to the South Carolina Department of Natural Resources no later than the last day of the 90 Day Appeals Period. A complete Appeals Package contains a cover letter, Protest Petition, Appeal Petition, and all required backup documentation.

### ***What information is required to submit a protest?***

**For a floodplain boundary:** Certified topographic maps or ground elevation data that are of greater detail and/or are more recent than those used for the creation of the preliminary FIRM panel in question must be submitted. In addition, the requested changes to the floodplain should be annotated on the topographic mapping and preliminary FIRM panel. Protests of a floodway require updated hydraulic modeling.

**Corporate limits and road names/locations:** Community maps in digital or paper formats must be submitted indicating areas of error.

### ***What information is required to submit an appeal?***

**Scientifically Incorrect BFE:** The BFEs are determined to be scientifically incorrect if the methodology used in the determination of the BFEs is inappropriate or incorrect, or if the assumptions made as part of the methodology are inappropriate or incorrect. A proposal of the correct assumptions or methodology is required.

**Technically Incorrect BFE:** The BFEs are said to be technically incorrect if at least one of the following is true:

- (1) The methodology was not applied correctly,
- (2) The methodology was based on insufficient or poor data,
- (3) The application of methodology included disputed mathematical or measurement errors, or
- (4) The methodology did not account for the effects of physical changes that have occurred within the floodplain.

**If a BFE is incorrect, the following must be submitted:** A current certified study, a revised study (including hydrologic and/or hydraulics analysis), flood profiles, or floodplain/floodway boundaries that use the alternative method believed to be superior to the method used in the preliminary study.

**If a measurement is incorrect, the following must be submitted:** Information that identifies the error and provides correct values and current documentation from land surveyor.

## Letter Of Final Determination

Following resolution of all appeals, protests, and comments concerning the preliminary maps, the Letter of Final Determination (LFD) will be issued directly from FEMA. Contained within the LFD will be the EFFECTIVE DATE for the newly created FIS and FIRM materials. This will be exactly six months from the date of the LFD. It is vital to note that the LFD initiates the 6 Month Compliance Period.



### Federal Emergency Management Agency

Washington, D.C. 20472

**CERTIFIED MAIL  
RETURN RECEIPT REQUESTED  
DATE:**

**ADDRESSEE:**

**IN REPLY REFER TO:**

**COMMUNITY:  
COMMUNITY NUMBER:  
MAP PANELS AFFECTED:**

Dear Mayor:

This is to formally notify you of the final flood hazard determination for your community in compliance with Title 44, Chapter I, Part 67, Code of Federal Regulations. On December 6, 2000, the Department of Homeland Security's Federal Emergency Management Agency (FEMA) issued a Flood Insurance Rate Map (FIRM) that identified the Special Flood Hazard Areas (SFHAs), the areas subject to inundation by the base (1-percent-annual-chance) flood in the Town of Floodville. Recently, FEMA completed a re-evaluation of flood hazards in your community. On December 5, 2005, FEMA provided you with Preliminary copies of the Flood Insurance Study (FIS) report and FIRM that identify existing flood hazards in your community....

## 6 Month Compliance Period

### South Carolina Model

#### Flood Damage Prevention Ordinance

##### Community Name

ARTICLE I.	GENERAL Standards	4
Section A	Statutory Authorization	4
Section B	Findings of Fact	4
Section C	Statement of Purpose and Objectives	4
Section D	Lands to which this Ordinance Applies	5
Section E	Establishment of Development Permit	5
Section F	Compliance	5
Section G	Interpretation	5
Section H	Partial Invalidity and Severability	5
Section I	Warning and Disclaimer of Liability	5
Section J	Penalties for Violation	6
ARTICLE II.	DEFINITIONS	6
Section A	General	6
ARTICLE III.	ADMINISTRATION	12
Section A	Designation of Local Administrator	12
Section B	Adoption of Letter of Map Revisions	12
Section C	Designation of Party Responsible for Biennial Report	12
Section D	Development Permit and Certification Requirements.	12
Section E	Duties and Responsibilities of the Local Administrator	14

During the 6 Month Compliance Period all communities must update and adopt a new local floodplain ordinance which is based on the revised study and newly created maps. If this action is not completed within the 6 Month Compliance Period, the community in question will be **suspended** from the NFIP on the day that the maps become effective. As a result, FEMA will issue both a 90 Day and 30 Day Suspension Letter if they are not notified of compliance within the 6 Month Compliance Period.

Note: The Attorney General of South Carolina has deemed the automatic adoption clause to not be legal, thus all mention of it must be removed from any updated local ordinance. This applies to the use of the language “any revisions there to,” found in the majority of local floodplain ordinances.

## Preliminary Maps As Best Available Data

The use of draft or preliminary Flood Insurance Study Data as best available data is discussed in FEMA's Floodplain Management Bulletin 1-98, which is made available at all PDCC meetings. Requirements for use of the preliminary FIS and FIRM vary by flood zone indicated.

**Zone A:** Communities are required to utilize the data to a reasonable level. As a result, communities are required to use BFE and floodway information from the preliminary maps once the LFD is issued.

**Zone AE, A1-30, AH, AO, VE, and V1-30:** FEMA cannot require the use of the preliminary maps at any time in these zones, however it is recommended that consideration of maps should be given once the appeals process is complete. In areas where the BFE increased significantly communities have the responsibility to protect new or substantially improved structures. As a result, it is recommended that the BFEs are used as best available data. In areas with a decrease in BFEs, it is recommended that the current effective map be used until the preliminary maps become effective. This is to prevent development that may or may not be in compliance with the updated maps once they become effective.

**Zone B, C, and X:** The use of BFE and floodway data is not required in these zones. If such an area is being revised to be within an above-mentioned zone, the use of best available data is recommended.

**Note:** During the 90 Day Appeal Period, prior to an LFD being issued, the BFE and floodway data are considered preliminary and subject to change.

## FIS And FIRM Panel Adoption

### ***What must an NFIP participating community do when FEMA provides new or revised flood hazard data?***

Every time FEMA provides a community with new FIRM panels and/or a FIS, the community must adopt an updated Local Floodplain Ordinance that references the new flood study and accompanying maps. If a new flood hazard type or floodway designation is provided, the community will likely have to enhance their current ordinance to continue to meet the minimum requirements of the NFIP. Submittal of your ordinance to the SCDNR Flood Mitigation Program for review is the easiest way to determine necessary additions or deletions.

### ***When must a community adopt the new or revised flood hazard data?***

The community must adopt their new ordinance and submit a certified copy to the State no later than the effective dates of the new FIRM panels. This date can be found in the LFD, which initiates the 6 Month Compliance Period.

### ***What happens if a community does not adopt the appropriate floodplain management regulations during the 6 Month Compliance Period?***

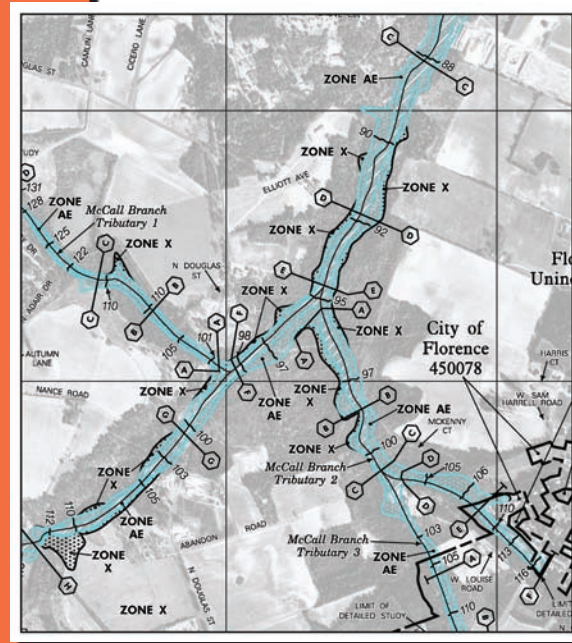
On the effective date of the new FIS your community will be **suspended** from the NFIP, thus denying residents the opportunity to purchase flood insurance and decreasing their access to disaster assistance for those structures within the identified special flood risk hazard areas.



## Effective Phase

On the date provided in the LFD, your community's preliminary maps will become effective. At this point, your community must have updated and adopted a new local floodplain ordinance that is based on the use of the newly created maps. During this phase several actions are recommended. They include:

- Review of emergency shelter locations against the new floodplain boundaries
- Inform local insurance agents of the completion of the Map Modernization process and ensure knowledge of it affects on flood insurance within the community
- Inform local surveyors and developers of the new maps
- Continue public outreach to those residents affected by the new floodplain



# What Is The Mapping Information Platform (MIP)?

The Mapping Information Platform (MIP) website created by FEMA provides a wealth of information on floodplain mapping and its updating process.

Topics include:

- Map Modernization
- News and Events
- Tools and Links
- Learning
- Map Viewer
- Contact Center

Communities with access will be able to use the MIP to track their floodplain study and update its status throughout the process at: <https://hazards.fema.gov>.



## How Does This All Affect The NFIP?

As a result of recent development and restudy since the last published FIRM panels, it is likely that the Map Modernization Process will affect some properties in your community. As some properties are removed from the 100-year floodplain, others will be included depending on whether new studies indicate the flood risk has increased or decreased at each location.

If the New Map Shows:	These Requirements, Options, & Savings Apply
Change from low or moderate flood risk to high risk	<b>Flood insurance is mandatory.</b> Flood insurance will be federally required for most mortgage holders. Insurance costs may rise to reflect true (high) risk. <b>Grandfathering offers savings.</b> The NFIP has “grandfathering” rules to recognize policyholders who have built in compliance with the flood map or who maintain continuous coverage. An insurance agent can provide more detail on how to save.
Change from high flood risk to low or moderate risk	<b>Flood insurance is optional, but recommended.</b> The risk has only been reduced, not REMOVED. Flood insurance can still be obtained, at a lower rate. Twenty to 25% of all flood insurance claims come from low to moderate risk areas. <b>Conversion offers savings.</b> An existing policy can be converted to a lower-cost Preferred Risk Policy.
No change in risk level	No change in insurance rates. Property owners should talk to their insurance agent to learn their specific risk and take measures to protect their property and assets.

High flood risk zones include AE, A, AH, AO, VE, and V Zones. High risk areas are often referred to as Special Flood Hazard Areas and flood insurance is mandatory for most mortgage holders. Low or Moderate flood risk zones include shaded X and X zones. Lower-cost preferred rate flood insurance policies, known as Preferred Risk Policies, are often available in these areas.

## What If My Community Does Not Participate In The NFIP?



Regardless of a community's participation in the NFIP, the mapping process will include all communities within a given county. As a result, flood hazard areas may be identified. By not participating in the NFIP those residents within the hazard area will not be able to purchase flood insurance.

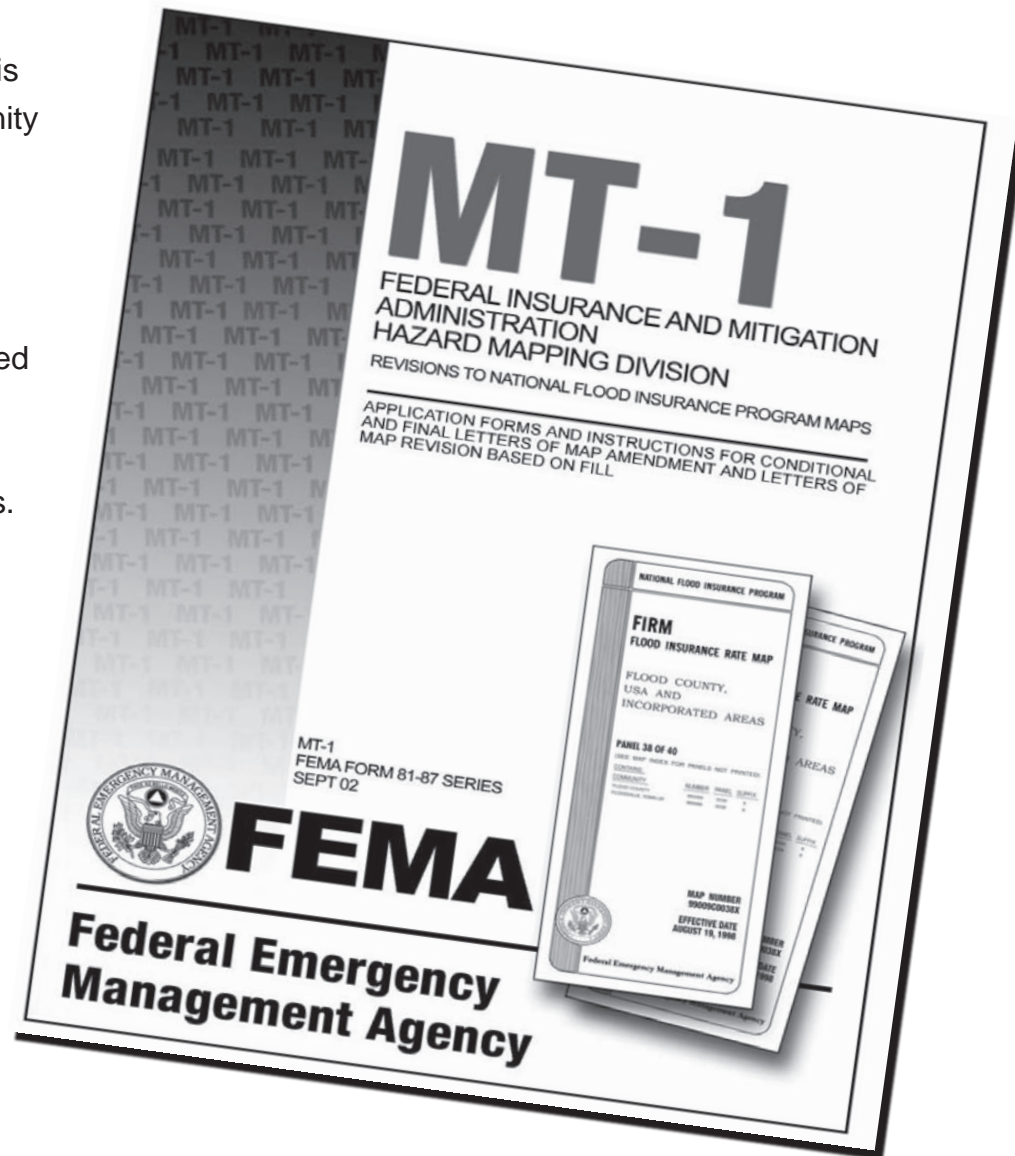
To join the NFIP, communities must submit a completed application, a community Resolution of Intent, a copy of their corporate boundaries, and adopt a local floodplain ordinance. For assistance on the NFIP's enrollment criteria, please contact the NFIP State Coordinator.

Though participation in the NFIP is completely voluntary, it is important to note the various effects of non-participation.

- Flood insurance is not available to residents,
- No Federal grants or loans may be made in SFHA,
- Only limited Federal Disaster Assistance may be provided in flood hazard areas,
- No Federal Mortgage insurance may be provided,
- Property buyers must be notified of flood risk and lack of insurance availability,
- Actuarial rates go into effect regardless of participation in program,
- Unsafe development practices occur, and
- Local government may be liable for damages suffered in the flood area by not participating because their actions deny the ability of property owners to protect themselves and their failure to take positive steps to reduce threats to life and property within their community.

## How Does The Map Modernization Process Affect LOMC?

During the time lapse between map updates it is likely residents and developers in your community submitted Letters of Map Change (LOMC) to FEMA. This is done for multiple reasons, but occurs primarily to remove a property from the indicated floodplain or correct an inadequate base flood elevation. All LOMCs will be reviewed by the map production time. LOMCs covering significant areas will be reviewed, revalidated, and incorporated on your updated FIRM panels. Those that affect minimal land area will be reviewed and revalidated by FEMA. In the summary of map actions (SOMA), which covers changes made to your flood maps, all LOMCs that were recertified will be listed and the LOMC will remain in affect.





## Community Outreach

We recommend that you involve your residents from the beginning of the Map Modernization Process to the effects on the NFIP that may result. Residents are encouraged to provide comment during the 90 Day Appeal and Protest period; thus it is vital they are made aware of the process. There are several opportunities throughout the process to reach out and inform your citizen core. Methods for outreach include, but are not limited to:

- Mass Mailings
- Meeting Announcements
- Letters Indicating Future Inclusion in Floodplain
- Informational Outreach Materials
- Press Releases
- Public Meetings
- Informational Open House

To obtain more information on what outreach activities may work in your community, as well as public notice templates, visit FloodSmart at: <http://www.floodsmart.gov>.





## Other Programs of Interest

### Community Rating System (CRS)

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The NFIP CRS program recognizes those communities that actively go beyond the minimum floodplain management standards by reducing flood insurance premiums 5-45% within the community. Additional benefits from the CRS program include: property damage prevention, avoided economic losses from flood events, prevention of damage to community infrastructure, and saving lives. You may already be engaged in many of these activities. To learn more about the CRS and how to implement it in your community, visit their website at

[www.fema.gov/business/nfip/crs.shtm](http://www.fema.gov/business/nfip/crs.shtm).

### Certified Floodplain Manager Program (CFM)

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The CFM Program enhances credibility and visibility of the floodplain management profession in the nation. The goals of the program promote the wise use of the nation's floodplains, reduce flood losses, and enhance the natural functions of the floodplain through improving knowledge and abilities of local floodplain managers. Once you become a CFM through successful completion of the standardized exam, continuing education requirements ensure that the benefits of the CFM program continue. To learn more about the CFM program, call the ASFPM at (608) 274-0123 or visit their website at

[www.floods.org](http://www.floods.org).

### Flood Mitigation Assistance (FMA)

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FMA provides funding to assist states and communities in implementing measures to reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes, and other structures insurable under the National Flood Insurance Program (NFIP).

There are three types of grants available under FMA: Planning, Project, and Technical Assistance Grants. Communities receiving FMA Planning and Project Grants must participate in the NFIP. A few examples of eligible FMA projects include: the elevation, acquisition, and relocation of NFIP-insured structures.

[www.fema.gov/government/grant/fma/index.shtm](http://www.fema.gov/government/grant/fma/index.shtm).

## Map Modernization Glossary

**Appeal** is a formal objection to the proposed FIS or FIRM panels that is submitted by local officials or property owners within the newly studied area. All appeals must be based on technical data that indicates an incorrect BFE was established.

**Approximate Study** results in a delineation of the 100-year floodplain, but does not result in the determination of BFE for the study location.

**Base Flood Elevation (BFE)** is the elevation to which water would rise in the event of a base flood event.

**Base Map** is the map provided by the community that becomes the base for the newly created DFIRM. The base map should include street names, railroad crossings, bridges, dams, and drainage culverts.

**Compliance Period** occurs during the post-preliminary phase following the issuance of the Letter of Final Determination by FEMA prior to the

new maps becoming effective.

It is a six-month period in which communities are required to update and adopt their local floodplain ordinance in order to remain in proper standing with the NFIP.

**Detailed Study** is a flood hazard study that results in delineation of the 100-year floodplain as well as the creation of BFEs.

**Effective Date** As determined by the Letter of Final Determination (LFD) issued from FEMA, this is the date at which your new FIS and FIRM panels will become effective.

**Flood Insurance Rate Map (FIRM)** Floodplain map produced by FEMA that indicates those areas at greatest risk for inundation of floodwaters during the 100-year flood event.

**Flood Insurance Study Report (FIS)** is the detailed report that illustrates the flood hazard assessment conducted for each location. This report includes text, data tables, photos, and flood profiles.

**Letter of Final Determination (LFD)** is issued by FEMA to alert communities to the date on which their new FIS report and FIRM panels will become effective—marking the end of the Compliance Period.

**Letter of Map Change (LOMC)** is a formal amendment or revision to the NFIP flood maps that occurs between official map updates.

**Protest** occurs when a community or local residents object to information on the preliminary maps, except for the BFEs. The protest must be officially submitted during the 90 Day Appeal Period.

**Regulatory Floodway** is the stream bed and areas adjacent to it that must remain free of obstruction to prevent an increase in surrounding BFEs.

**Summary of Map Actions (SOMA)** is the list of actions taken during the updating of one's floodplain maps.

## Commonly Used Acronyms

<b>BFE</b>	Base Flood Elevation	<b>LOMA</b>	Letter of Map Amendment
<b>CAP</b>	Community Assistance Program	<b>LOMC</b>	Letter of Map Change
<b>CCO</b>	Consultation Coordination Officer	<b>LOMR</b>	Letter of Map Revision
<b>CID</b>	Community Identification Number	<b>LOMR-F</b>	Letter of Map Revision Based On Fill
<b>CRS</b>	Community Rating System	<b>MAS</b>	Mapping Activity Statement
<b>CTP</b>	Cooperating Technical Partner	<b>MHIP</b>	Multi-Year Hazard Identification Plan
<b>DFIRM</b>	Digital Flood Insurance Rate Map	<b>MICS</b>	Monitoring Information on Contracted Studies
<b>FBFM</b>	Flood Boundary and Floodway Map	<b>MIP</b>	Mapping Information Platform
<b>FEDD</b>	Flood Elevation Determination Docket	<b>MMMS</b>	Map Modernization Management System
<b>FEMA</b>	Federal Emergency Management Agency	<b>MNUSS</b>	Mapping Needs Update Support System
<b>FHBM</b>	Flood Hazard Boundary Map	<b>MSC</b>	Map Service Center
<b>FIRM</b>	Flood Insurance Rate Map	<b>NFIP</b>	National Flood Insurance Program
<b>FIS</b>	Flood Insurance Study	<b>SFHA</b>	Special Flood Hazard Area
<b>GPO</b>	Government Printing Office	<b>SOMA</b>	Summary of Map Action
<b>LAG</b>	Lowest Adjacent Grade	<b>SPR</b>	Special Problem Report
<b>LFD</b>	Letter of Final Determination	<b>TSDN</b>	Technical Support Data Notebook

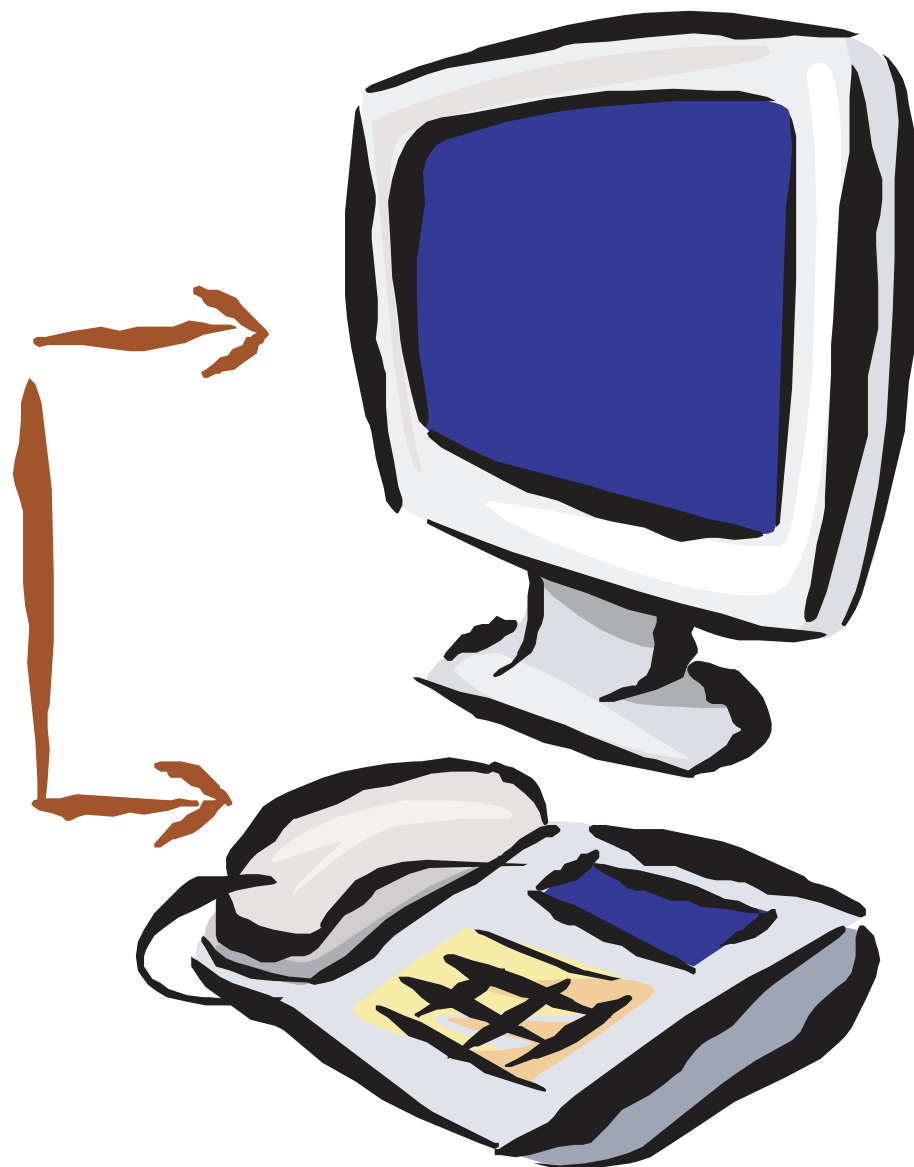
## Where Can I Find More Information?

You may always find more information about the Map Modernization Process by visiting the South Carolina Department of Natural Resources Flood Mitigation Program website at <http://www.dnr.sc.gov> or by visiting the Federal Emergency Management Agency at <http://www.fema.gov>.

To obtain information concerning the NFIP and mandatory purchase requirements, contact your local insurance agent or call toll-free **1-800 427-4661** or visit FEMA at <http://www.floodsmart.gov>.

FEMA publications may be ordered during regular business hours from the FEMA Distribution Center by calling **1-800-480-2520**.

To obtain copies of your community's floodplain maps, call the FEMA Map Service Center at **1-800-358-9616**. For flood map questions concerning LOMC and assistance with online tutorials, call toll-free **1-877-336-2627**. Additionally, assistance with all mapping questions may be obtained by visiting <http://www.msc.fema.gov>.



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